



\*\*FILE\*\*ID\*\*BASMID

B 4

BBBBBBBBBB      AAAAAAAA      SSSSSSSS      MM      MM      IIIIII      DDDDDDDD  
BBBBBBBBBB      AAAAAAAA      SSSSSSSS      MM      MM      IIIIII      DDDDDDDD  
BB      BB      AA      AA      SS      MMMMM      MMMMM      II      DD      DD  
BB      BB      AA      AA      SS      MMMMM      MMMMM      II      DD      DD  
BB      BB      AA      AA      SS      MM      MM      MM      II      DD      DD  
BB      BB      AA      AA      SS      MM      MM      MM      II      DD      DD  
BBBBBBBBBB      AA      AA      SSSSSS      MM      MM      II      DD      DD  
BBBBBBBBBB      AA      AA      SSSSSS      MM      MM      II      DD      DD  
BB      BB      AAAAAAAA      SS      MM      MM      II      DD      DD  
BB      BB      AAAAAAAA      SS      MM      MM      II      DD      DD  
BB      BB      AA      AA      SS      MM      MM      II      DD      DD  
BB      BB      AA      AA      SS      MM      MM      II      DD      DD  
BBBBBBBBBB      AA      AA      SSSSSS      MM      MM      IIIIII      DDDDDDDD  
BBBBBBBBBB      AA      AA      SSSSSS      MM      MM      IIIIII      DDDDDDDD

```
1 0001 0 MODULE BASSMID (          ! Extract the substring of the BASIC MID
2 0002 0           IDENT = '1-005'   ! File: BASMID.B32
3 0003 0           ) =
4 0004 1 BEGIN
5 0005 1
6 0006 1 ****
7 0007 1 *
8 0008 1 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
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25 0025 1 *
26 0026 1 *
27 0027 1 ****
28 0028 1
29 0029 1
30 0030 1 ++
31 0031 1 FACILITY: String support library
32 0032 1
33 0033 1 ABSTRACT:
34 0034 1
35 0035 1 This module extracts a substring according to the BASIC-PLUS-2
36 0036 1 syntax. It finds the substring of a main string starting at the
37 0037 1 character position specified by the second input parameter and
38 0038 1 continues for the number of characters specified by the third
39 0039 1 input parameter. This substring is copied to the destination string.
40 0040 1
41 0041 1 ENVIRONMENT: User mode, AST level or not or mixed
42 0042 1
43 0043 1 AUTHOR: R. Will, CREATION DATE: 21-Feb-79
44 0044 1
45 0045 1 MODIFIED BY:
46 0046 1
47 0047 1 R. Will, 21-Feb-79: VERSION 01
48 0048 1 01 - original
49 0049 1 02 - change linkage and call to COPY routine. 15-Mar-79 RW
50 0050 1 1-003 - Change string linkages to start with STR$. JBS 04-JUN-1979
51 0051 1 1-004 - Change call to STR$COPY. JBS 16-JUL-1979
52 0052 1 1-005 - CALL STR$LEN_EXTR, DELETE THIS WHEN COMPILER CALLS STR$. RW 1-NOV-79
53 0053 1 --
54 0054 1
55 0055 1 !<BLF/PAGE>
```

```
57      0056 1 |  
58      0057 1 | SWITCHES:  
59      0058 1 |  
60      0059 1 |  
61      0060 1 | SWITCHES ADDRESSING_MODE (EXTERNAL = GENERAL, NONEXTERNAL = WORD_RELATIVE);  
62      0061 1 |  
63      0062 1 |  
64      0063 1 |  
65      0064 1 | LINKAGES:  
66      0065 1 |  
67      0066 1 |  
68      0067 1 | TABLE OF CONTENTS:  
69      0068 1 |  
70      0069 1 |  
71      0070 1 | FORWARD ROUTINE  
72          BASSMID : NOVALUE;                                ! Find the MID of a string  
73          0071 1 |  
74          0072 1 |  
75          0073 1 | INCLUDE FILES:  
76          0074 1 |  
77          0075 1 |  
78          0076 1 |  
79          0077 1 | REQUIRE 'RTLIN:RTLPSECT';                      ! Declare PSECTS code  
80          0172 1 |  
81          0173 1 |  
82          0174 1 | MACROS:  
83          0175 1 |  
84          0176 1 |  
85          0177 1 | EQUATED SYMBOLS:  
86          0178 1 |  
87          0179 1 |  
88          0180 1 | PSECT DECLARATIONS  
89          0181 1 |  
90          0182 1 | DECLARE_PSECTS (BAS);  
91          0183 1 |  
92          0184 1 | OWN STORAGE:  
93          0185 1 |  
94          0186 1 |  
95          0187 1 | EXTERNAL REFERENCES:  
96          0188 1 |  
97          0189 1 |  
98          0190 1 | EXTERNAL ROUTINE  
99          0191 1 |           STR$LEN_EXTR;                         ! Routine to do the copy  
          0192 1 |
```

```
101      0193 1 GLOBAL ROUTINE BASSMID (DEST_DESC,  
102          0194 1     SRC_DESC,  
103          0195 1     CHAR_POS,  
104          0196 1     SUB_LENGTH) : NOVALUE=          | Pointer to destination descriptor  
105          0197 1                                     | Pointer to source descriptor  
106          0198 1                                     | First character to be included  
107          0199 1                                     | Length of the substring  
108          0200 1  
109          0201 1  
110          0202 1  
111          0203 1  
112          0204 1  
113          0205 1  
114          0206 1  
115          0207 1  
116          0208 1  
117          0209 1  
118          0210 1  
119          0211 1  
120          0212 1  
121          0213 1  
122          0214 1  
123          0215 1  
124          0216 1  
125          0217 1  
126          0218 1  
127          0219 1  
128          0220 1  
129          0221 1  
130          0222 1  
131          0223 1  
132          0224 1  
133          0225 1  
134          0226 1  
135          0227 1  
136          0228 1  
137          0229 1  
138          0230 1  
139          0231 1  
140          0232 1  
141          0233 1  
142          0234 1  
143          0235 1  
144          0236 1  
145          0237 1  
146          0238 1  
147          0239 1  
148          0240 2  
149          0241 2  
150          0242 2  
151          0243 2  
152          0244 2  
153          0245 2  
154          0246 2  
155          0247 2  
156          0248 2  
157          0249 2  
          ++  
          FUNCTIONAL DESCRIPTION:  
          This routine extracts the characters starting at the  
          character position in the source string specified by the input  
          parameter and continuing for the number of characters specified  
          by the input, and copies that substring  
          to the destination string (by JSB to STR$COPY_R R8) according  
          to the syntax of the class of the destination string.  
          If the input character position is < 1, 1 is used. If  
          the input character position is > the length  
          of the source string, then the destination string becomes a null  
          string. If the substring length is < 1 a null string is returned.  
          If character position + substring length - 1 > source string length  
          then the source string length is used.  
          FORMAL PARAMETERS:  
          DEST_DESC.wt.dx    pointer to destination string descriptor  
          SRC_DESC.rt.dx    pointer to source string descriptor  
          CHAR_POS.rw.v     character position in src to start substring  
          SUB_LENGTH.rw.v    length of substring  
          IMPLICIT INPUTS:  
          NONE  
          IMPLICIT OUTPUTS:  
          NONE  
          ROUTINE VALUE:  
          COMPLETION CODES:  
          NONE  
          SIDE EFFECTS:  
          NONE  
          --  
          BEGIN  
          MAP  
            DEST_DESC : REF BLOCK [8,BYTE];  
          MAP  
            SRC_DESC : REF BLOCK [8,BYTE];  
          STR$LEN_EXTR (DEST_DESC [0,0,0,0], SRC_DESC [0,0,0,0], CHAR_POS, SUB_LENGTH);  
          RETURN;
```

BASSMID  
1-005

F 4  
16-Sep-1984 00:46:31 VAX-11 Bliss-32 V4.0-742  
14-Sep-1984 11:55:19 [BASRTL.SRC]BASMID.B32;1

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: 158 0250 1 END;

!End of BASSMID

|  |  |                |                                    |
|--|--|----------------|------------------------------------|
|  |  |                | .TITLE BASSMID                     |
|  |  |                | .IDENT \1-005\                     |
|  |  |                | .EXTRN STR\$LEN_EXTR               |
|  |  |                | .PSECT _BASSCODE,NOWRT, SHR, PIC,2 |
|  |  |                | .ENTRY BASSMID, Save nothing       |
|  |  | 10 0000 00000  | PUSHAB SUB LENGTH                  |
|  |  | 0C AC 9F 00002 | PUSHAB CHAR POS                    |
|  |  | 04 AC 9F 00005 | MOVO DEST DESC, -(SP)              |
|  |  | 04 7D 00008    | CALLS #4, STR\$LEN_EXTR            |
|  |  | 04 FB 0000C    | RET                                |
|  |  | 04 00013       |                                    |

: Routine Size: 20 bytes, Routine Base: \_BASSCODE + 0000

: 159 0251 1  
: 160 0252 1 END  
: 161 0253 1  
: 162 0254 0 ELUDOM

!End of module

#### PSECT SUMMARY

| Name      | Bytes | Attributes  |
|-----------|-------|---|
| _BASSCODE | 20    | NOVEC,NOWRT, RD , EXE, SHR, LCL, REL, CON, PIC,ALIGN(2) |

#### COMMAND QUALIFIERS

: BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/NOTRACE/LIS=LISS:BASMID/OBJ=OBJ\$:\$BASMID MSRC\$:\$BASMID/UPDATE=(ENH\$:\$BASMID)

: Size: 20 code + 0 data bytes  
: Run Time: 00:01.9  
: Elapsed Time: 00:05.1  
: Lines/CPU Min: 8106  
: Lexemes/CPU-Min: 21191  
: Memory Used: 19 pages  
: Compilation Complete

0028 AH-BT13A-SE  
VAX/VMS V4.0

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BASMD  
LIS

BASMULDT  
LIS

BASNOLIMP  
LIS

BASMOVEAR  
LIS

BASMSGDEF  
LIS

BASMSGGEN  
LIS

BASONECHR  
LIS

BASMOVE  
LIS

BASNUM  
LIS

BASNAMEAS  
LIS

BASNUMI  
LIS